DETAILED ACTION

EXAMINER'S AMENDMENT

1.   An examiner's amendment to the record appears below. Should the

changes and/or additions be unacceptable to applicant, an amendment may be

filed as provided by 37 CFR 1.312. To ensure consideration of such an

amendment, it MUST be submitted no later than the payment of the issue fee.

        Authorization for this examiner's amendment was given in a telephone

interview with Mr. Louis P. Herzberg, applicant's representative, on November

07, 2008.

        The application has been amended as follows:

In the claims:

Claims 2-4, 6-13, 19-20 have been canceled.

Claims 1, 5, 18 have been amended as follows:

1.   (Currently amended) An extensible-markup-language Path Language

(XPath) evaluating method comprising evaluating the XPath relevant to an

extensible-markup-language (XML) document by use of a computer, said step of

evaluating being carried out individually concerning inputted XML events, while

subjecting the XML document to streaming processing, the step of evaluating

XPath comprising:

        a first step of serially inputting XML event strings constituting an XML

document to be processed;

        a second step of serially evaluating the XPath respectively relevant to the

inputted XML events while subjecting the XML document to streaming

processing and retaining information concerning a result of partial evaluation of

the XPath in given storing means when the XPath is partially established with

respect to a given XML event;

a third step of repeating the partial evaluation of the XPath along with the

input of the XML event strings while considering the result of the partial

evaluation retained in the storing means and evaluating that the XPath is

established with respect to the XML document when the last part of the XPath is

established; and

judging establishment of the entire XPath while accumulating results of

said partial evaluation enabling evaluation of the XPath by use of said streaming

processing.

wherein the second step includes the steps of:

generating an automaton for expressing the XPath to be evaluated; and

evaluating the XPath partially by allowing transition of a state of the

automaton based on inputted respective XML events and retaining a result of the

partial evaluation as the state of the automaton;

wherein the second step includes the steps of:

generating a first stack which expresses the XPath to be evaluated with a

string of stack elements; and

generating a second stack for analyzing a nested structure of the XML

document to be processed based on respective inputted XML events and then

evaluating the XPath partially by comparing the first stack with the second stack;

and

wherein the second step includes the steps of:

serially constructing a document tree indicating a document structure of the XML document to be processed based on input of respective XML events; and

evaluating the XPath along with construction of the document tree by use of the document tree including a part which has been constructed.

5.　　　(Currently amended) An XPath evaluating apparatus comprising:

an evaluation executing unit being embodied in a program storage device and executed by a processor, readable by machine, tangibly embodying a program of instructions tangible computer readable medium, and employed for inputting XML event strings constituting an XML document and serially evaluating the XPath with respect to each of XML events while subjecting the XML document to streaming processing, said serially evaluating being carried out individually concerning inputted XML events, while subjecting the XML document to streaming processing, and while retaining information concerning a result of partial evaluation of the XPath when the XPath is partially established with respect to a given XML event, and evaluating that the XPath is established with respect to the XML document when the last step of the XPath is established;

an XML event transferring unit being embodied in a program storage device and executed by a processor, readable by machine, tangibly embodying a program of instructions tangible computer readable medium, and employed for inputting the XML event strings constituting the XML document to be processed

and serially transferring the XML event strings to the evaluation executing unit;
and

      a judging unit judging establishment of the entire XPath while
accumulating results of said partial evaluation enabling evaluation of the XPath
by use of said streaming processing.

      an automaton generating unit being embodied in a program storage
device and executed by a processor, readable by machine, tangibly embodying a
program of instructions tangible computer readable medium, and employed for
generating an automaton which expresses the XPath to be evaluated,
wherein the evaluation executing unit performs partial evaluation of the XPath by
allowing a state of the automaton generated by the automaton generating unit to
perform transition based on the XML events transferred from the XML event
transferring unit, and retains a result of the partial evaluation as the state of the
automaton;

      a stack generating unit being embodied in a program storage device and
executed by a processor, readable by machine, tangibly embodying a program of
instructions tangible computer readable medium, and employed for generating a
first stack which expresses the XPath to be evaluated with a string of stack
elements,

      wherein the evaluation executing unit performs partial evaluation of the
XPath by generating a second stack for analyzing a nested structure of the XML
document subject to processing based on the XML events transferred from the

<u>XML event transferring unit and then comparing the first stack generated by the</u>

<u>stack generating unit with the second stack.</u>

18.　　(Currently amended) A computer program product comprising a program

storage device <u>and executed by a processor,</u> readable by machine, tangibly

embodying a program of instructions the program of instructions for causing a

computer to effect the Xpath evaluating apparatus of claim 5.

Allowable Subject Matter

2.　　Claims 1, 5, 14-18 are allowed (Re-numbered as 1-7).

3.　　The following is an examiner's statement of reasons for allowance:

Prior art of record do not teach the combination of claimed elements

including: "a first step of serially inputting XML event strings constituting an XML

document to be processed;

"a second step of serially evaluating the XPath respectively relevant to the

inputted XML events while subjecting the XML document to streaming

processing"; "wherein the second step includes the step of: generating an

automaton for expressing the XPath to be evaluated"; "analyzing a nest structure

of the XML document to be process" as recited in independent claim 1, similarly

for independent claim 5.

Thus, prior art of record neither renders obvious nor anticipates the

combination of claimed elements in light of the specification. Dependent claims

14-18 are allowed at least by virtue of their dependencies from their pertinent

independent claims. After a further search and a thorough examination of the

present application and in light of the prior art made of record, claims 1, 5, 14-18
are allowed.

Conclusion

4.   Any comments considered necessary by applicant must be submitted no
later than the payment of the issue fee and, to avoid processing delays, should
preferably accompany the issue fee. Such submissions should be clearly labeled
"Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from
the examiner should be directed to THU-NGUYET LE whose telephone number
is (571)270-1093. The examiner can normally be reached on 6:00-2:30.

If attempts to reach the examiner by telephone are unsuccessful, the
examiner's supervisor, John Breene can be reached on 571-272-4107. The fax
phone number for the organization where this application or proceeding is
assigned is 571-273-8300.

Information regarding the status of an application may be obtained from

the Patent Application Information Retrieval (PAIR) system. Status information

for published applications may be obtained from either Private PAIR or Public

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Private PAIR only. For more information about the PAIR system, see http://pair-

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free). If you would like assistance from a USPTO Customer Service

Representative or access to the automated information system, call 800-786-

9199 (IN USA OR CANADA) or 571-272-1000.

September 18, 2008
/Thu-Nguyet Le/
Examiner, Art Unit 2162

/John Breene/

Supervisory Patent Examiner, Art Unit 2162